Datasheet

Multi-parameter controller

SIN-MPP500

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The Multi-Parameter Online Water Quality Analyzer is a new generation of drinking water quality monitoring equipment independently developed and manufactured by our company. This equipment can be widely used for online water quality monitoring in urban or rural water treatment plants, water transmission pipelines, secondary water supply systems, user terminals, indoor swimming pools, large water purification equipment, and direct drinking water systems. It is an indispensable online analysis device in the fields of water plant production process control, water conservancy and water affairs management, and hygiene supervision.

The Multi-Parameter Online Water Quality Analyzer is available in both standard and custom versions. The standard version monitors parameters such as turbidity, residual chlorine/chlorine dioxide/ozone, pH,temperature, conductivity/TDS, and ORP. Meanwhile, the custom version allows for the deletion of parameters and customization of the instrument's appearance, logos, system names, and other items based on customer needs.

Features

- **Integration**：Integrated design, unified water inlet and outlet, centralized data display, wall-mounted installation to prevent flooding and ground moisture, does not occupy ground space, which is convenient for installation, operation and maintenance;
- **Multi-parameters**：Adopt integrated design to monitor four parameters of turbidity, residual chlorine dioxide, pH and temperature at the same time, and expand the conductivity/TDS, dissolved oxygen, ORP and other parameters;
- **High precision**: Long-term stable and accurate measurement in the order of tap water (0.1～1NTU) and purified water (0.001～0.1NTU);
- **High reliability**: Imported components are used for sensors and instrument components, which are optimized for online analysis of water quality with high reliability;
- **Low maintenance**: Support remote control functions such as automatic sewage discharge and remote adjustment, which can effectively reduce the frequency of on-site maintenance, low system operation and maintenance costs;

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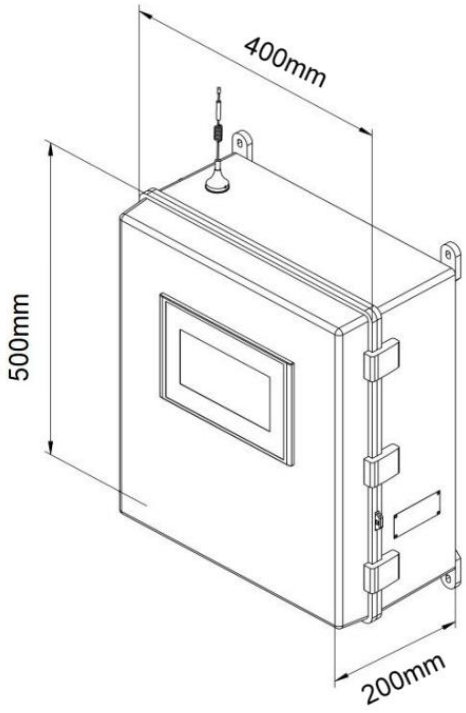
- **Self-protection**: The equipment supports built-in water ingress detection and automatic protection functions to effectively avoid accidental damage to the sensor, and built-in lightning protection devices to avoid lightning damage to the equipment;
- **Easy integration**: standard RS485 Modbus-RTU protocol and device wireless data transmission channel support on-site third-party device access;
- **Strong environmental adaptability**: optional temperature control heating antifreeze module, the equipment can be operated all year round outdoors in cold areas;
- **Highly customized**: The equipment can be customized with trademark, name, cabinet appearance, etc.

Parameters				
System Technical Specifications				
Communication Output	RS485 Modbus RTU Communication Protocol + Wireless Data Interface			
Power Supply	(220±22)VAC, (50±1)Hz			
Power Consumption	≤30W			
Inlet Water Flow	(0.03～0.06)m^3/h			
Inlet Water Pressure	＜0.3MPa			
Operating Temperature	（0~50）℃			
Operating Humidity	≤95%RH (No Condensation)			
Storage Temperature	(4~50) ℃			
Cabinet Dimensions	500mm*400mm*200mm			
Weight	Approximately 12kg			
Display	Color Touch Screen			
Turbidity Performance Parameters				
Measurement Method	90° Light Scattering Method			
Light Source	660nm Laser			
Measurement Range	(0~1)NTU	(0~20)NTU	(0~100)NTU	(0~2000)NTU
Accuracy	2% or ±0.02NTU, whichever is greate		10% or ±0.5NTU , whichever is greater	
Resolution	0.0001NTU		0.001NTU	
Detection Limit	0.005NTU			
Repeatability	≤1%			
Zero Drift	≤1.5%			
Indication Stability	≤1.5%			
Response Time	T_{90}≤120 s			
Recommended Maintenance Cycle	3~12 Months (Depending on Site Water Quality)			
Residual Chlorine/Chlorine Dioxide (High Purity)/Ozone Performance Parameters				
Measurement Range	(05)mg/L / (020)mg/L			
Accuracy	±0.05mg/L or ±5%, whichever is greater (DPD Comparison Error ±10%)			
Resolution	0.01mg/L			
Detection Limit	0.05mg/L			
Response Time	≤120 Seconds			
Recommended Maintenance Cycle	1~3 Months or Weekly Calibration, 3~6 Months for Consumable Replacement			
pH/ORP (Optional) Performance Parameters				
Measurement Method	sensor Method (Automatic Temperature Compensation)			
Measurement Range	pH: (014)pH, ORP: (-2000~2000)mV			
Accuracy	pH: ±0.1pH or ±2%, whichever is greater, ORP: ±20mV or ±2%, whichever is greater			

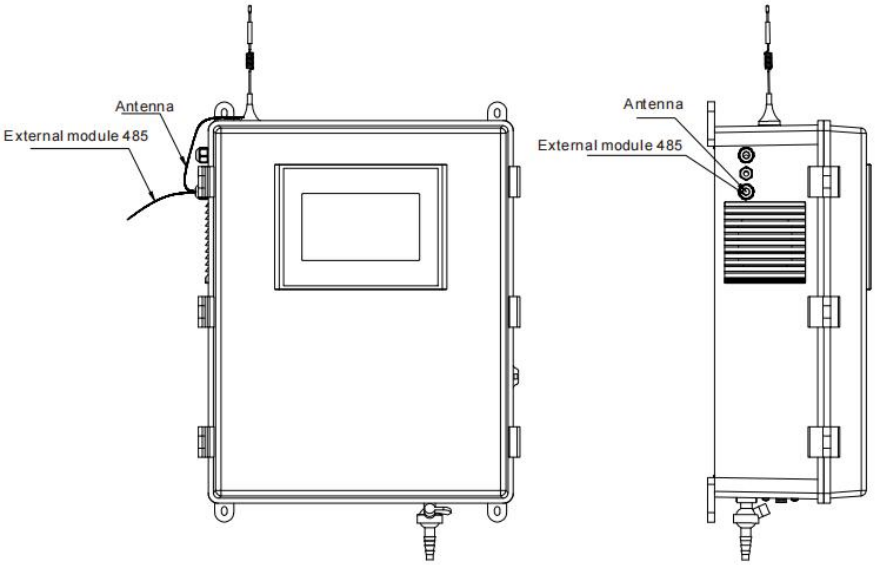
Resolution	pH: 0.01pH, ORP: ±1mV
Repeatability	pH: ±0.1pH, ORP: ±10mV
Response Time	≤60 Seconds
Recommended Maintenance Cycle	1~3 Months
Temperature Performance Parameters	
Measurement Method	Thermistor Method
Measurement Range	(0~50)℃
Accuracy	±0.5℃
Resolution	0.1℃
Repeatability	≤0.5℃
Response Time	≤25 Seconds
Recommended Maintenance Cycle	12 Months
Conductivity Performance Parameters	
Measurement Method	Conductivity Cell Method
Measurement Range	（0~20000）uS/cm Pure water sensor: （0~20）uS/cm
Accuracy	± 0.8% F.S pure water sensor: 3% F.S
Resolution	0.01μS/cm
Repeatability	≤0.4%FS
≤0.4%FS	≤30 Seconds
Recommended Maintenance Cycle	3~6 Months

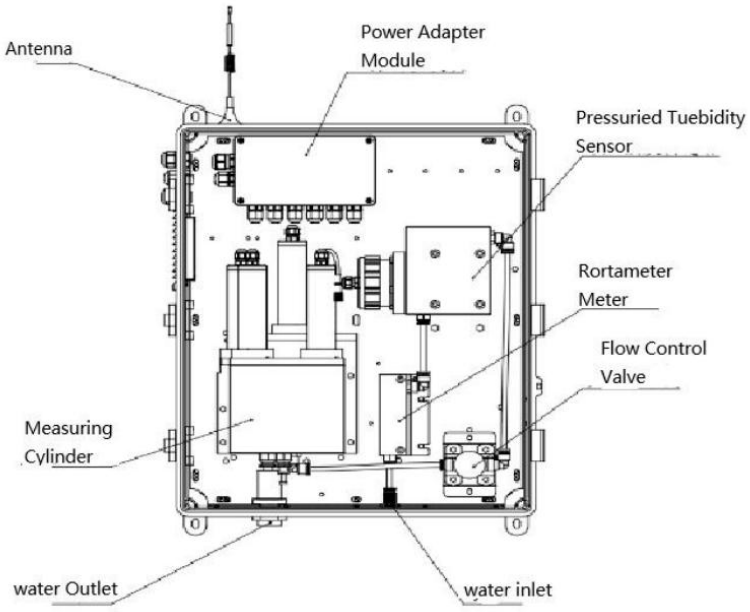
Dimension

Product dimensions



Internal structure





Ordering code

SIN-MPP500-3A-A-E-4					Description
SIN-MPP500	-	-	-	-	
Measurement Parameter Type	3A				Three Parameters: pH, Turbidity, Temperature
	3B				Three Parameters: pH, Residual Chlorine, Temperature
	4A				Four Parameters: pH, Turbidity, Residual Chlorine, Temperature
	4B				Four Parameters: pH, Turbidity, Chlorine Dioxide, Temperature
	5A				Five Parameters: pH, Turbidity, Residual Chlorine, Conductivity, Temperature
	5B				Five Parameters: pH, Turbidity, Chlorine Dioxide, Conductivity, Temperature
	XX				Other
Output		A			RS485
Power supply			E		220VAC
Housing Material and Protection Rating				4	Plastic ABS,IP65